

In the specification:

The paragraph beginning on page 13, line 13 is amended as follows:

FIG. 10 is a flow chart, comprising steps 64-67, for providing the calibration dataset of step 60 of FIG. 9, in accordance with embodiments of the present invention. Step 64 provides a set of generic geometric shapes which will be used for developing the calibration dataset. Such geometric shapes may include, *inter alia*, rectangles, squares, triangles, etc. of varying geometric dimensions. The generic shapes are for test purposes and the generic shapes may not comprise, and may not be comprised by, an integrated circuit design. Step 65 prints the generic shapes of step 64 on a test mask, using the same mask fabrication tooling as is used in fabricating the physical mask. Step 66 measures the printed generic shapes on the test mask. Any distortion for the shapes printed on the test mask caused by the mask fabrication tooling is assumed to be essentially the same as similar distortion that would be produced in a real physical mask for the same generic shapes of a mask fabrication database using the same mask fabrication tooling. Step 67 collects the provided generic shapes of step 64 and the measured printed generic shapes of step 66 to form the calibration dataset. Thus, the calibration dataset includes data as to how a lack of precision in the mask fabrication tooling causes distortion of the generic geometric shapes provided in step 64.

The paragraph beginning on page 17, line 1 is amended as follows:

In summary, the present invention discloses a novel mask inspection method described in the flow chart FIG. 9 and a system that performs the method. The system comprises a first subsystem that performs steps 51-54 of FIG. 9 and a second subsystem that performs steps 55-61

of FIG. 9. Provided is a mask fabrication database describing geometrical shapes S to be printed on a reticle mask through use of mask fabrication tooling. The shapes S appear on the physical mask as shapes S' upon being printed by the mask fabrication tooling in accordance with the mask fabrication database. At least one of the shapes S' may be geometrically distorted relative to a corresponding at least one of the shapes S due to a lack of precision in the mask fabrication tooling. Also provided is a mask inspection database to be used for inspecting the mask after the mask has been fabricated by the mask fabrication tooling. The mask inspection database describes shapes S'' approximating the shapes S'. A geometric distortion between the shapes S' and S'' is less than a corresponding geometric distortion between the shapes S' and S. FIGS. 7-8 provide an example of the preceding notion involving S, S', and S'', in which the shapes S include shapes 1A and 2A, shapes S' include shapes 1 and 2, and shapes S'' comprise shapes 1B and 2B.